

REMARKS

Claims 13-32 are pending in this application. Claims 18, 22 and 30 are amended.

Applicants thank Examiner Osterhout for the courtesies extended to Applicants' representative during the January 20, 2010, telephone interview. During the interview, claims 18, 20-22, 24 and 26 were discussed.

The Claimed Invention

An exemplary embodiment of the invention, as recited by independent claim 13, is directed to a household washing appliance that includes an electronic program controller for controlling rinsing program sequences, the electronic program controller including a programmable control module having an interface for programming at least one rinsing program sequence that can be executed by the program controller and the electronic program controller being configured such that programming thereof can be carried out without dismantling parts of the household appliance.

Another exemplary embodiment of the invention, as recited by new independent claim 27, is directed to a household washing appliance that includes an electronic program controller for controlling program sequences of the washing appliance, the electronic program controller including a programmable control module having an interface for programming at least one program sequence that can be executed by the program controller, wherein the electronic program controller is configured such that programming thereof can be carried out without dismantling parts of the washing appliance, the programmable control module is located adjacent to the interface, and the programmable control module and the interface are located at a rear wall of the washing appliance.

Another exemplary embodiment of the invention, as recited by independent claim 31, is directed to a method of programming a household washing appliance, the washing appliance having an electronic program controller for controlling program sequences of the washing appliance, the electronic program controller including a programmable control module having an interface for programming at least one program sequence that can be executed by the program

controller, wherein the electronic program controller is configured such that programming thereof can be carried out without dismantling parts of the washing appliance, the programmable control module is located adjacent to the interface, and the programmable control module and the interface are located at a rear wall of the washing appliance. The method includes accessing the interface without dismantling parts of the washing appliance; and transmitting the at least one program sequence into the programmable control module through the interface.

In conventional household washing appliances, especially in a dishwasher, one or more rinsing processes using heated rinsing liquid are usually carried out in the course of the rinsing operation in order to clean the items to be washed. After the last rinsing process, a clear rinsing phase is usually carried out, followed by a drying process to dry the items to be washed. These and many other operating modes are combined in specific rinsing program sequences matched to the type and quantity of items to be washed. The rinsing program sequences are usually controlled by an electronic program controller wherein a plurality of rinsing program sequences is usually stored in the electronic components thereof.

These program controllers are frequently obtained by the appliance manufacturer via suppliers in the form of program control modules in which the desired rinsing program sequences are already pre-programmed. After installing the program control module in the appliance, it is no longer possible to subsequently program the program controller or change the rinsing program sequences pre-programmed in the program controller. Or, this can only be done with considerable effort because it is necessary to dismantle significant parts of the dishwasher or the program controller must be removed because the program controller is located in an interior location of the appliance.

The present invention addresses and solves this problem by providing an electronic program controller for controlling rinsing program sequences such that the controller includes a programmable control module having an interface for programming at least one rinsing program sequence and being configured such that programming of the program controller can be carried out without dismantling parts of the household appliance.

In an exemplary embodiment, the programmable control module is located adjacent to an outside wall of the appliance and the interface for programming the control module can be contacted from outside the appliance.

The Park Reference

The Office Action rejects claims 13, 15-18 and 22 under 35 U.S.C. 102(b) as allegedly being anticipated by Park et al. (WO 02/12610 A1). Applicants traverse this rejection.

The applied reference does not teach or suggest the features of the claimed invention including 1) an electronic program controller for controlling rinsing program sequences (claim 13); 2) a programmable control module including electronic components and at least one microprocessor and/or memory means (claim 17); 3) a programmable control module containing an operating system that programs the control module (claim 18); 4) at least one electrical connection for the electrical connection of the programmable control module with the appliance, the electrical connection being embodied as a group plug with a plurality of electrical contacts (claim 22); and 5) a programmable control module located adjacent to the interface, and the programmable control module and the interface are located at a rear wall of the washing appliance (claims 27 and 31).

Regarding claims 13 and 17, Applicants reassert the arguments made in the Amendment filed September 16, 2009.

As discussed in the interview, claim 18 includes the feature of the programmable control module containing an operating system that programs the control module. Applicants respectfully submit that Park does not disclose any operating system used for programming. Further, Park does not disclose the location of any operating system used for programming. Further still, Park does not disclose a programmable control module containing an operating system that programs the control module. Claim 18 is amended to simplify the claim language without changing its scope.

The Office Action states that one of ordinary skill in the art looking at Park would understand that the circuit board which receives information via the connection port further includes a program to determine the wash cycle of the washing machine. Applicants disagree with this statement. Circuit boards are used for many different things and many circuit boards do not include programs. Even if Park had shown a program to determine the wash cycle of the washing machine, there is nothing in Park that says that such a program resides on the circuit board. Such a program could reside at a different location in the machine. But more importantly, claim 18 states “the programmable control module contains an operating system that programs the control module”, not a program to determine the wash cycle (which the Examiner cites Park as showing). Park does not mention an operating system for programming a control module. It is unclear from Park where any operating system for programming the control module resides. An operating system for programming the control module could, for example, reside in an external programming device. In any case, Park does not disclose an operating system that programs a control module being located in the control module.

As discussed in the interview, claim 22 includes the feature of a group plug with a plurality of contacts being provided for the electrical connection of the programmable control module with the appliance. Applicants respectfully submit that Park does not show or discuss how a programmable control module is electrically connected to an appliance. The Office Action considers the circuit board 20 of Park to be a programmable control module. First of all, applicants disagree with the assertion that circuit board 20 is a programmable control module. Further, Park does not show or discuss how circuit board 20 is electrically connected to the washing machine. Specifically, Park does not show or state that circuit board 20 is electrically connected to the washing machine by a group plug with a plurality of electrical contacts. There is no reason to think that circuit board 20 is not hardwired to the washing machine because it is not stated that circuit board 20 is designed to be removable. In any case, Park does not disclose a group plug with a plurality of contacts for the electrical connection of a programmable control module with an appliance. Claim 22 is amended to simplify the claim language without changing its scope.

In view of the foregoing, Applicants respectfully submit that Park does not disclose each and every feature of claims 13, 15-18 and 22 and therefore rejection under 35 USC §102(b) is inappropriate. As a result, Applicants request that the rejection be withdrawn.

The Oyler Reference in view of the Park Reference

The Office Action rejects claims 13, 14, 24 and 26-32 under 35 U.S.C. 103(a) over U.S. Patent Application Publication No. 2003/0205954 to Oyler et al. in view of Park. Applicants traverse this rejection.

As explained above, the Park reference does not teach or suggest the feature of an electronic program controller for controlling rinsing program sequences. The Oyler reference does not remedy the deficiencies of the Park reference. Indeed, the Examiner does not allege that the Oyler reference teaches or suggests the feature of an electronic program controller for controlling rinsing program sequences as recited in independent claim 13.

Regarding claim 24, Applicants reassert the arguments made in the Amendment filed September 16, 2009.

Claim 24 includes the feature of the programmable control module being located in a bottom tray of the dishwasher. In contrast, the Oyler reference is directed to a dishwasher door assembly. In every one of the extensive number of instances that Oyler mentions a control panel or a control mount surface (in almost every paragraph of the application), the control panel or control mount surface is located in the door of the dishwasher. Applicants respectfully submit that in light of the clear teaching by Oyler that a control panel and/or control mount surface is to be located in a door of a dishwasher, placing a controller in a bottom tray of a dishwasher is not an obvious design choice.

Further, placing the programmable control module in the bottom tray of the dishwasher yields properties not present in the applied references because their placement allows contact from outside the dishwasher. Placing the programmable control module in the bottom tray allows the dishwasher to be supplied, during final functional testing after production, with power via the primary power plug connector in the programmable control module and programmed via

the interface (see paragraph 017). This location facilitates connection of the dishwasher during final functional testing, reducing the cost of production of the dishwasher.

Claim 26 includes the feature of the programmable control module and the interface being located at a rear wall of the bottom tray of the washing appliance. As discussed above, Oyler's clear teaching that a control panel and/or control mount surface is to be located in a door of a dishwasher teaches away from placing a controller in a bottom tray of a dishwasher. Further, locating the programmable control module and the interface at a rear wall of the bottom tray of the washing appliance yields properties not present in the applied references because their placement allows contact from outside the dishwasher. Placing the programmable control module and the interface at a rear wall of the bottom tray allows the washing appliance to be supplied, during final functional testing after production, with power via the primary power plug connector in the programmable control module and programmed via the interface (see paragraph 017). This location facilitates connection of the washing appliance during final functional testing, reducing the cost of production of the appliance.

Claim 27 includes the feature of an electronic program controller including a programmable control module having an interface for programming at least one program sequence that can be executed by the program controller, wherein the electronic program controller is configured such that programming thereof can be carried out without dismantling parts of the washing appliance, the programmable control module is located adjacent to the interface, and the programmable control module and the interface are located at a rear wall of the washing appliance.

As discussed above, Oyler's clear teaching that a control panel and/or control mount surface is to be located in a door of a dishwasher teaches away from placing a programmable control module at a rear wall of a washing appliance. Further, locating the programmable control module and the interface at a rear wall of the washing appliance yields properties not present in the applied references because their placement allows contact from outside the dishwasher. Placing the programmable control module and the interface at a rear wall of the appliance allows the washing appliance to be supplied, during final functional testing after production, with power via the primary power plug connector in the programmable control

module and programmed via the interface (see paragraph 017). This location facilitates connection of the washing appliance during final functional testing, reducing the cost of production of the appliance.

Claim 29 includes the feature of the programmable control module and the interface being located at a rear wall of a bottom tray of a dishwasher. The arguments presented above with regard to the rejection of claim 26 also apply to this rejection of claim 29.

Claim 30 includes the feature of the programmable control module containing an operating system that programs the control module. The arguments presented above with regard to the rejection of claim 18 also apply to this rejection of claim 30. Claim 30 is amended to simplify the claim language without changing its scope.

The method of claim 31 includes the feature of transmitting at least one program sequence into a programmable control module of an electronic program controller through an interface, the programmable control module being located adjacent to the interface, and the programmable control module and the interface being located at a rear wall of the washing appliance. The arguments presented above with regard to the rejection of claim 27 also apply to this rejection of claim 31.

In view of the foregoing, Applicants respectfully submit that the combination of Oyler and Park does not suggest the features of claims 13, 14, 24 and 26-32 and therefore rejection under 35 USC §103(a) is inappropriate. As a result, Applicants request that the rejection be withdrawn.

The Park Reference in view of the Anderson Reference

The Office Action rejects claims 19 and 25 under 35 U.S.C. 103(a) over Park in view of U.S. Patent No. 5,917,690 to Anderson. Applicants traverse this rejection.

As explained above, the Park reference does not teach or suggest the feature of an electronic program controller for controlling rinsing program sequences. The Anderson reference does not remedy the deficiencies of the Park reference. Indeed, the Examiner does not

allege that the Anderson reference teaches or suggests the feature of an electronic program controller for controlling rinsing program sequences as recited in independent claim 13.

With regard to this rejection, Applicants reassert the arguments made in the Amendment filed September 16, 2009.

In view of the foregoing, Applicants respectfully submit that the combination of Park and Anderson does not suggest the features of claims 19 and 25 and therefore rejection under 35 USC §103(a) is inappropriate. As a result, Applicants request that the rejection be withdrawn.

The Park Reference in view of the Wattrick Reference

The Office Action rejects claims 20 and 21 under 35 U.S.C. 103(a) over Park in view of U.S. Patent No. 5,915,851 to Wattrick et al. Applicants traverse this rejection.

As explained above, the Park reference does not teach or suggest the feature of an electronic program controller for controlling rinsing program sequences. The Wattrick reference does not remedy the deficiencies of the Park reference. Indeed, the Examiner does not allege that the Wattrick reference teaches or suggests the feature of an electronic program controller for controlling rinsing program sequences as recited in independent claim 13.

With regard to this rejection, Applicants reassert the arguments made in the Amendment filed September 16, 2009.

In view of the foregoing, Applicants respectfully submit that the combination of Park and Wattrick does not suggest the features of claims 20 and 21 and therefore rejection under 35 USC §103(a) is inappropriate. As a result, Applicants request that the rejection be withdrawn.

The Park Reference in view of the Harrison Reference

The Office Action rejects claim 23 under 35 U.S.C. 103(a) over Park in view of U.S. Patent Application Publication No. 2002/0131243 to Harrison et al. Applicants respectfully traverse this rejection.

As explained above, the Park reference does not teach or suggest the feature of an electronic program controller for controlling rinsing program sequences. The Harrison reference does not remedy the deficiencies of the Park reference. Indeed, the Examiner does not allege that the Harrison reference teaches or suggests the feature of an electronic program controller for controlling rinsing program sequences as recited in independent claim 13.

With regard to this rejection, Applicants reassert the arguments made in the Amendment filed September 16, 2009.

In view of the foregoing, it is respectfully submitted that the combination of Park and Harrison does not suggest the features of claim 23 and therefore rejection under 35 USC §103(a) is inappropriate. As a result, it is respectfully requested that the rejection be withdrawn.

CONCLUSION

In view of the above, Applicants respectfully request entry of the present Amendment and allowance of claims 13-32. If the Examiner has any questions regarding this amendment, the Examiner is requested to contact the undersigned. If an extension of time for this paper is required, petition for extension is herewith made.

Respectfully submitted,

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